RIVET KING®

User Instruction Manual

ZT-1017-VS
ZT-6000-VS

FOR SALES, SERVICE OR TECH SUPPORT CALL:

1800-BUY-RIVET or 1-800-289-7483

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SAFETY

- Do not use outside deisng intent or with equipment that is not RECOMMENDED BY the manufacturer.
- Always disconnect the air supply before attempting any maintenance or adjustment/fitting of nose equipment
- Do not operate a tool that is directed towards any person(s) or with the mandrel catcher off the tool
- All modifications carried out on the tool without express written consent of the manufacturer shall be done so at the customers' sole responsibility
- Refer to this manual before attempting any maintenance operation. do not disassemble this tool before rfering to this manual.
- Avoid excessive contact with hydraulic oil, as soon as possible wash hands thoroughly
- Do not exceed 7 bar / 100 psi inlet pressure, the use of a pressure regulator is highly recommended
- Inspect the tool using preventitive maintenance techniques at reugularly scheduled intervals. inspect for damage and function by trained competant personel. replace the pneumatic cylinder housing or hydrauilic cylinder housing whernever there is evidanec of impact damage, chipping, or cracking.
- wear safety glasses and adopt firm footing during operation.

Specifications

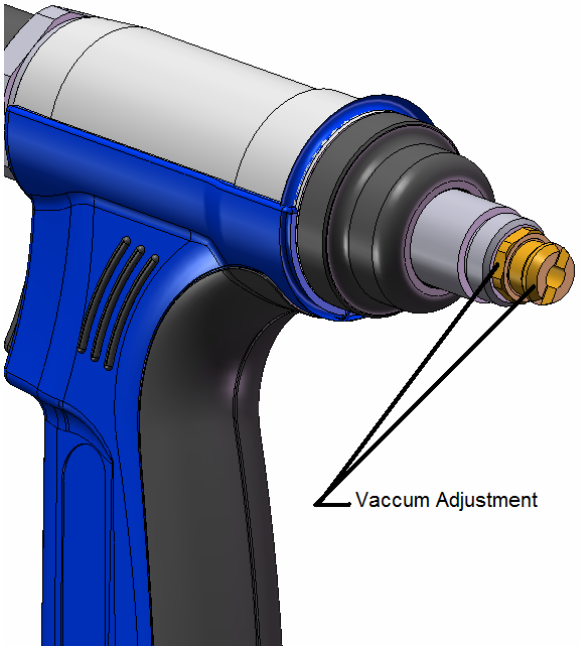
The specifications and information contained in this manual are applicable only to the tool with which it was supplied. Industrial Rivet & Fastener Co reserve the right to make any changes without notice as part of Industrial Rivet & Fastener Co policy of continuous improvement.

Specifications for ZT-8000 Rivet Tool

Air Pressure	Min/Max	90 psi Max.
Bore	Nom.	10 mm
Stroke	Minimum	17 mm
Pull Force	@5.5 bar/80psi	2,248 lbsF
Cycle Time	Approximately	1.2 seconds
Noise Level	Less than	125 dB(A)
Weight		4.3 lbs
Hydraulic Oil		Mobil DTFE 24

PREPARING THE TOOL FOR SERVICE

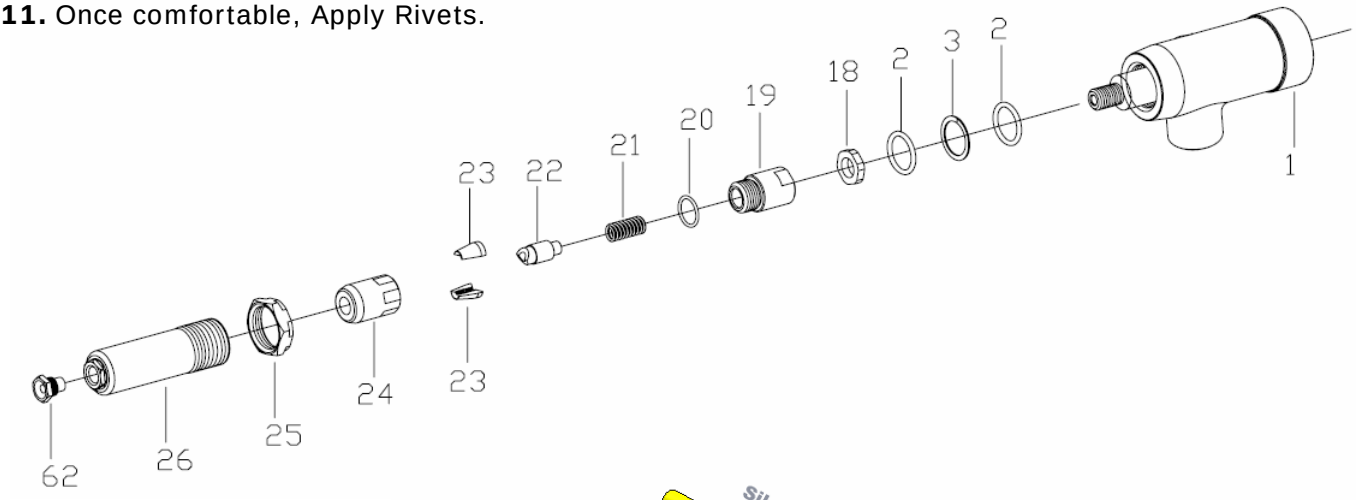
1. Inspect for damage
2. Connect the tool to the air supply
3. Choose and securely install the applicable nose piece for the rivets you wish to apply.
4. Adjust the vacuum until rivet is held in the nose piece while tool is pointed downward.
    a. Adjust vacuum by rotating the small brass valve located at reat of the tool inside the mandrel catcher using the wrench provided.



5. Bring the tool and the rivet into the application hole. Insure the rivet head flat onto surface
6. Fully Actuate the trigger. The tool will cycle and set the rivet while ejecting the nail into the rear mandrel catcher.
7. Empty catcher when at 50% capacity

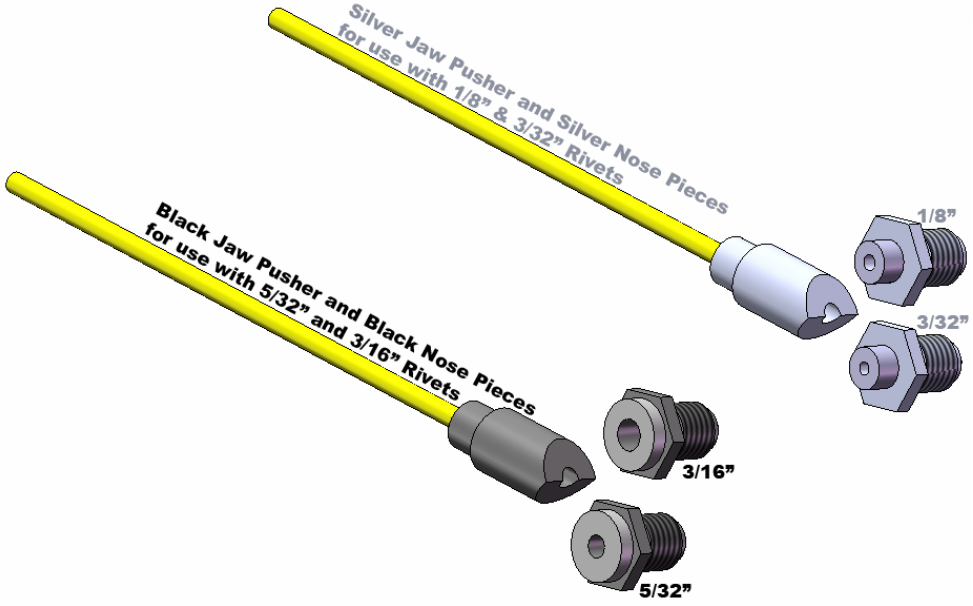
JAW CLEANING PROCEDURE / JAMMED GUN REMEDY

1. Disconnect tool from air supply
2. Leaving the nose piece attached, remove the nose case **26** using a wrench by loosening locknut **25** and then by loosening **26** at the wrench point just below the nose piece.
3. Fit two wrenches to the tool keeping the nut **19 & 20** towards the piston stationary while unscrewing the jaw casing **24**. It is important that you only unscrew the nut closest to the jaws (jaw casing) **24**. **DO NUT ADJUST LOCKNUT 18 and 19.**
4. Take care during removal as this jaw casing is spring loaded and contains 2 small jaws **23**, a jaw pusher **22**, and a spring **21**. Do not lose these pieces.
5. Once removed, remove the mandrel from the jaws, discard mandrel.
6. Clean Jaws **23** with a mineral spirit then and coat outside of jaws (outside only) with a light layer of white lithium grease. Be sure to coat the outside of the jaws only.
7. Replace jaws into jaw case **23**, followed by jaw pusher **22**, and spring **21**.
8. Re-apply jaw case **24** securely to the tool using a wrench.
9. Reapply the nose case **26** securely to the tool
10. Reattach air supply. Actuate tool without rivet. Check Function.
11. Once comfortable, Apply Rivets.



PROPER JAW PUSHER SELECTION

The proper Jaw Pusher must be used so that the rivets flow through the tool when the vacuum system is activated. If the wrong jaw pusher is used during riveting, it is possible that two rivets can get stuck alongside each other jamming the gun. Another failure could happen when the jaw pusher is too large for the rivet causing the vacuum system to be ineffective due to the lack of air/mandrel resistance. Be sure to use the proper Jaw Pusher!


Silver Jaw Pusher and Silver Nose Pieces
for use with 1/8" & 3/32" Rivets
1/8"
3/32"
Black Jaw Pusher and Black Nose Pieces
for use with 5/32" and 3/16" Rivets
3/16"
5/32"

1/8" & 3/32" Rivets – Silver Jaw Pusher
3/16" & 5/32" Rivets – Black Jaw Pusher

AIR SUPPLY

- The rivet tool is powered by compressed air at an optimum pressure of 5.5 bar (80 psi)
- The use of a pressure regulator filter/lubricator unit within 3 meters of the tool is highly recommended to extend the life of the tool.

Dirt and/or water in the air supply can seriously impact the performance and durability of the tool; damage to the tool caused by contaminated air supply is not covered under warranty

MAINTENANCE

In order to maintain the tool in a safe working order it is important to carry out regular maintenance as prescribed by the manufacturer. A thorough inspection replacement of all seals within the tool should be carried out after 500,000 placings or annually, whichever is the sooner. Item numbers in parentheses refer to assembly drawing part numbers

Daily

- Check for air leaks. Any damaged hoses should be replaced
- Lubricate the tool by pouring a 1 drop of light lubricating oil into the air inlet on the tool
- If there is no pressure regulator, bleed the airline to clear it of accumulated dirt or water before connecting the air hose to the tool. If there is a filter, drain it.
- Check for proper nose piece use depending on the size of the rivet.
- Remove front jaw nose assembly and inspect for cracks or other damage to front and rear of the nose piece. Replace if necessary.
- Insure that rotary valve for the vaccum on the mandrel collection unit is correctly adjusted for fastener retention

Weekly

- Carry out procedures as per daily maintenance instructions above
- Clean and inspect the jaws for signs of damage or wear (groove running through the jaw serrations). Follow the instructions on page 4 for cleaning of jaws. Reassemble the tail jaws with a light coating of grease on the outer face that contacts the jaw housing. Do not allow grease to contaminate the grooved inner face of the jaws as mandrel slippage may result.

Monthly

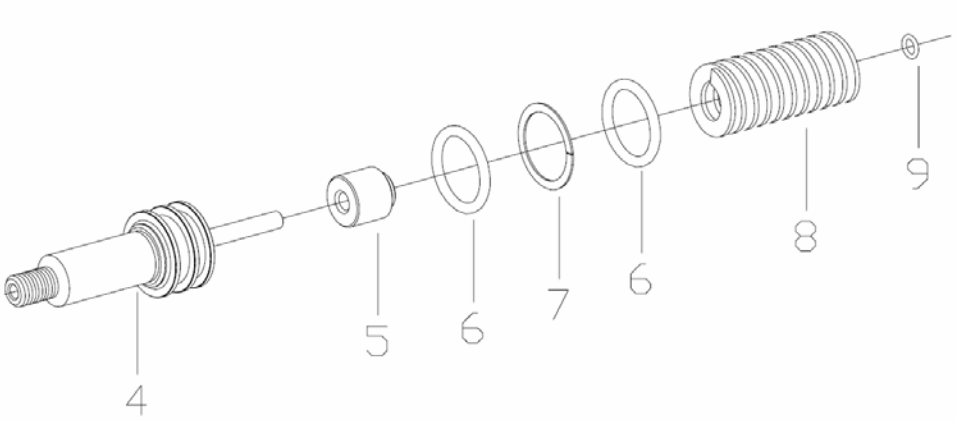
- Carry out procedures as per daily maintenance instructions above
- Check and replace cylinder bodies if there are signs of damage or cracks.

MAINTENANCE

Follow the instructions below to perform annual service and replacement of seals, item numbers in parentheses refer to assembly drawing part numbers on page 8.

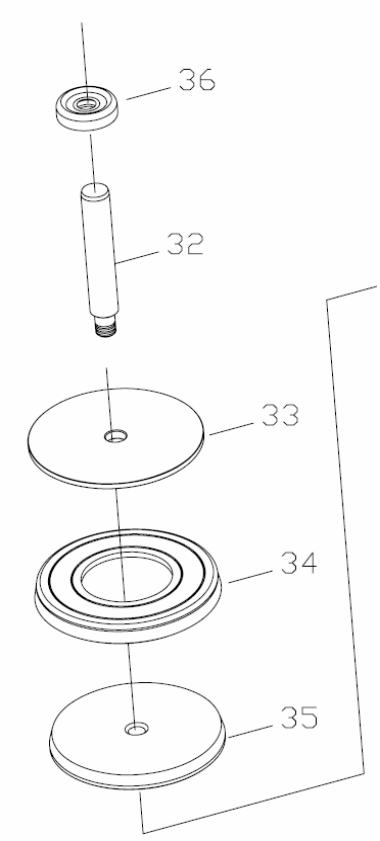
Head Assembly

Replace Seals **5, 6, 7, 9 and** Return Spring **8.** When seals are replaced apply a very light coating of white lithium grease to the hydraulic body and to the surface of the o-rings.



Pneumatic Piston Assembly

Replace **36 & 34** then proceed to oil filling procedure.

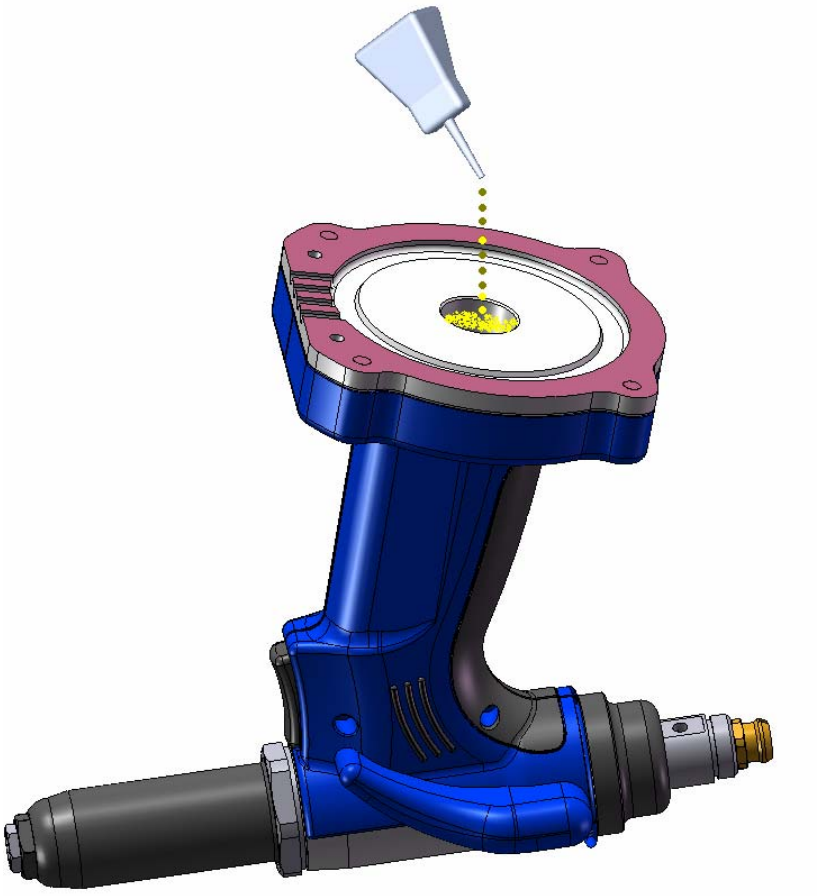


MAINTENANCE

Oil Filling Procedure

Turn the tool upside down. Unscrew 4 socket screws and remove air piston cover. Remove air cylinder and hydraulic piston rod until oil is exposed. Empty oil by turing the tool upside down and draining into a suitable container making best efforts to keep the tool handle and other parts from oil contamination. After oil is drained, remove excess oil from top surface. Add new oil (Mobile DTE 24 light hydraulic oil is preferred) by pouring into the hydraulic tube as shown. Add enough until about 1/8" below the top seal. Make every attempt to avoid the introduction of air or bubbles into the oil as its being poured. Adding the oil slowly and close to the edge of the tube will prevent this. Re-assemble the tool in reverse order.

IMPORTANT: DISCONNECT THE TOOL FROM THE AIR SUPPLY OR SWITCH OFF AT VALVE (55). REMOVE NOSE ASSEMBLY OR SWIVEL HEAD COMPONENTS. All operations should be carried out on a clean bench, with clean hands in a clean area. Ensure that the new oil is perfectly clean and free from air bubbles. Care MUST be taken at all times, to ensure that no foreign matter enters the tool, or serious damage may result.



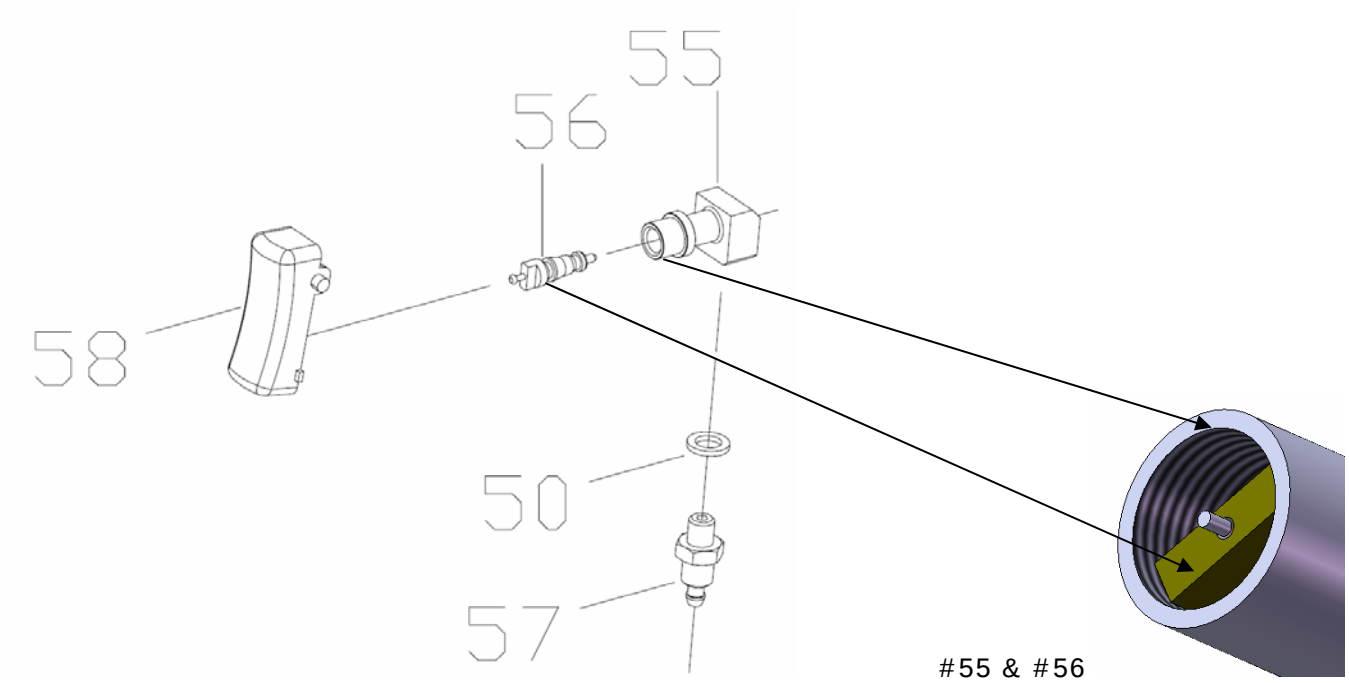
Valve Spool Assembly

- Send into authorized repair center for service.

MAINTENANCE

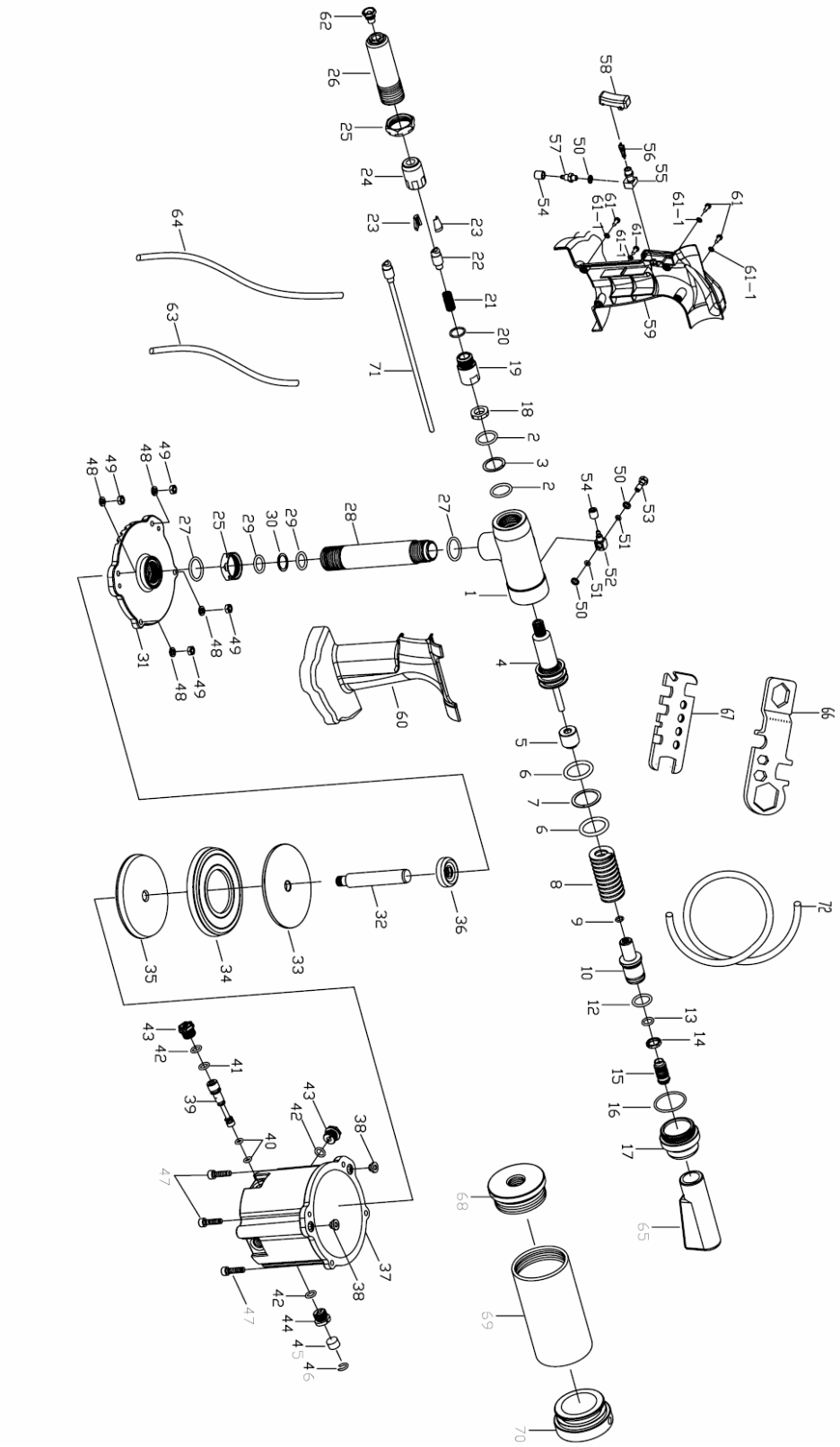
Trigger

- Inspect trigger pin valve by insuring **56** has not come loose. The proper depth should be just under the valve stem.
- If adjustment is necessarym using a fork wrench or tire valve tool, screw the trigger pin **56** into the valve stem. A very small amount of loctite243 is ok around the threaded portion only.
- If the trigger still fails, remove the trigger pin assembly from the valve stem and inspect the seal around the trigger pin for damage. If damaged, purchase a replacement part. Re-assemble according to the previous step.



#55 & #56

SCHEMATIC



PARTS LIST

Index	Part #	Description
1.	107101	Hydraulic Section
2.	OR1823	O-Ring (2)
3.	BR1823	Back-Up Ring
4.	107301	Hydraulic Plunger
5.	107302	Plug
6.	OR2431	O-Ring (2)
7.	BR2431	Back-Up Ring
8.	214309	Return Spring (Y)
9.	OR0609	O-Ring
10.	107123	Vacuum Tube Ass'y
12.	OR1621	O-Ring
13.	OR0913	O-Ring
14.	612115	Lock Nut
15.	612114	Vacuum Regulator
16.	OR3034	O-Ring
17.	214102	Rear Gland
18.	214306	Nut
19.	214305	Jaw Housing Coupler
20.	OR1417	O-Ring
21.	214308	Spring
22.	214302	Jaw Pusher
23.	612303	Jaw “M” (2)
24.	612314	Jaw Hosing
25.	918106	Lock Nut
26.	612105	Head
27.	OR2025	O-Ring (2)
28.	107108	Tube
29.	OR1419	O-Ring (2)
30.	BR1419	Back-Up Ring
31.	107401	Upper Cover
32.	107501	Plunger Rod
33.	107503	Front Head Disc
34.	819502	Packing Ring
35.	107502	Lower Plate
36.	918505	Bumper Ring
37.	107403	Air Cylinder Body
38.	107404	Rubber Washer (2)
39.	107408	Valve Stem
40.	OR0509	O-Ring (2)
41.	OR0711	O-Ring
42.	OR1014	O-Ring (3)
43.	107409	Inlet Plug (2)
44.	107407	Exhaust Plug
45.	107406	Muffler
46.	CH0809	Retaining Ring
47.	103225	Set Screw (4)
48.	SW0508	Spring Washer (4)
49.	HN1032	Nut (4)
50.	612714	Washer (3)
51.	OR0306	O-Ring (2)

Index	Part #	Description
52.	612712	Swivel
53.	612713	Socket
54.	612711	Cap (2)
55.	107602	Air Relieve Valve
56.	107601	Hose Joint
57.	612717	Socket (Lower)
58.	107201	Trigger
59.	107107R	Plastic Grip-Right
60.	107107L	Plastic Grip-Left
61.	ST0310	Screw (4)
61-1	PW0306	Washer
62.	612704	Nose Piece 1/8" (3.2mm) (opt.)
	612705	Nose Piece 5/32" (4.0mm) (opt.)
	612706	Nose Piece 3/16” (4.8mm)
	612708	Nose Piece 1/4" (6.4mm)
63.	107901	Air Hose-short
64.	107902	Air Hose-Long
65.	612905	Deflector
66.	918905	Multi-Wrench (A)
67.	612901	Multi-Wrench (B)
68.	819904	Front Cap (opt.)
69.	819901	Collection Bottle (opt.)
70.	819912	Rear Cap (opt.)
71.	214312	Jaw Pusher (For all rivets under size 3/16”) (opt.)
72.	612902	Guide Hose (opt.)

OIL MATERIAL SAFETY DATA SHEET (MSDS)

Priming is ALWAYS necessary after the tool has been dismantled and prior to operating. It may also be necessary to restore the full stroke after considerable use, when the stroke may be reduced and fasteners are not fully placed by one operation of the trigger

Oil Details

The recommended oil for priming is Mobil DTE 24 or Hyspin VG32 available in 0.51 or one gallon containers, or, you can use 30W hydraulic oil. Please see safety data below.

Mobil DTE 24 or Hyspin VG 32 Oil Safety Data

First Aid
SKIN:
Wash thoroughly with soap and water as soon as possible. Casual or short term contact requires no immediate attention.
INGESTION:
Seek medical attention immediately. DO NOT induce vomiting.
EYES:
Irrigate immediately with water for several minutes. Although NOT a primary irritant, minor irritation may occur following contact.

Fire
Flash point 232°C. Not classified as flammable.
Suitable extinguishing media: CO_2, dry powder, foam or water fog. DO NOT use water jets.

Environment
WASTE DISPOSAL: Through authorized contractor to a licensed site. May be incinerated. Used product may be sent for reclamation.
SPILLAGE: Prevent entry into drains, sewers, and water courses. Soak up with absorbent material.

Handling
Wear eye protection, impervious gloves (e.g. of PVC) and a plastic apron. Use in well ventilated area.

Storage
No special precautions.

Priming Kit
To enable you to follow the priming procedure opposite, you will need to obtain a priming kit:

PRIMING KIT: ZRT-HO	
PART NO	**DESCRIPTION**
HO	Mobil DTE 24
ZRT	Refill Bottle

TROUBLESHOOTING

Item numbers in parentheses refer to assembly drawing part numbers on page 9.

Problem	Possible Cause	Remedy
More than one operation of the trigger needed to place fastener	▪ Air leak ▪ Insufficient air pressure ▪ Lack of lubrication ▪ Worn or broken jaws ▪ Low oil level or air in oil ▪ Build up of dirt inside the nose assembly	▪ Tighten joints or replace components ▪ Adjust air pressure to within specification ▪ Lubricate tool at air inlet point ▪ Fit new jaws ▪ Prime tool ▪ Service nose assembly
Tool will not grip stem of fastener	▪ Worn or broken jaws ▪ Build up of dirt inside the nose assembly ▪ Loose jaw housing ▪ Weak or broken spring in nose assembly ▪ Incorrect component in nose assembly ▪ Rotary valve incorrectly adjusted	▪ Fit new jaws ▪ Service nose assembly ▪ Tighten against locking ring ▪ Fit new spring ▪ Identify and replace ▪ Read 'Operating Procedure'
Jaws will not release broken stem of fastener	▪ Build up of dirt inside the nose assembly ▪ Jaw housing, nose tip or nose casing not properly seated ▪ Weak or broken spring in nose assembly ▪ Air or oil leak ▪ Low oil level or air present in oil	▪ Service nose assembly ▪ Tighten nose assembly and adjust if necessary ▪ Fit new spring ▪ Tighten joints or replace components ▪ Prime tool
Jammed Gun / Cannot feed next fastener	▪ Broken stems jammed inside tool ▪ Rotary valve incorrectly adjusted	▪ Empty mandrel collector ▪ Check if jaw pusher is correct ▪ Adjust air pressure to within specification ▪ Adjust as in 'Operating Procedure'
Slow cycle	▪ Lack of lubrication ▪ Low air pressure ▪ Build up of dirt inside the nose assembly	▪ Lubricate tool at air inlet point ▪ Adjust air pressure to within specification ▪ Service nose assembly
Tool fails to operate	▪ No air pressure ▪ Damaged trigger valve ▪ Loose pneumatic piston cover ▪ Loose stem collector	▪ Connect and adjust to within specification ▪ Replace ▪ Tighten Socket Screws ▪ Tighten
Fastener fails to break	▪ Insufficient air pressure ▪ Fastener outside tool capability ▪ Low oil level or air present in oil	▪ Adjust air pressure to within specification ▪ Use more powerful tool ▪ Contact Industrial Rivet ▪ Prime/Re-Fill oil
Insufficient Vacuum Pressure	▪ Insufficient Air Pressure ▪ Improper Vacuum Pressure Adjustment ▪ Wrong Jaw Pusher	▪ Set to 90psi ▪ See "putting the tool into service" for proper adjustment ▪ See "proper jaw pusher selection"

Warranty Statement:

Industrial Rivet & Fastener Co. Inc. and Zipp Tools (hereinafter "IRF"), hereby warrants to the initial retail customer and original distributor ("Warrantee") only that its products will be free from defects in material and workmanship for a period of 1 year from the purchase date, provided that the products are used in accordance with "IRF's" instructions as to maintenance, operation and use.

The said warranty does not extend to goods subjected to misuse, neglect, accident or improper installation or maintenance or which have been altered or repaired by anyone other than the seller or its authorized agents.

The warrantee's only remedy and IRF's only obligation in the event of a defect or failure in the products, is that IRF, at its sole option, repair, replace or rework the products, but in no case shall the cost of the foregoing exceed the invoice price of the products.

This warranty shall be void if any person seeking to make a claim for defective or failed products fails to notify IRF within 30 days of receipt of evidence that the product is defective or has failed, or if said person fails to provide IRF with such evidence as is reasonably requested concerning the effect or failure, including without limitation, evidence of the date of purchase and date of installation.

This warranty is in lieu of all other warranties, expressed or implied, including merchantability, or fitness provided for herein. Under no circumstance shall IRF be liable for incidental or consequential damages arising from the defect or failure in its products.

Seller's sole obligation under the foregoing warranty will be limited to, at Seller's option, repair or replacement of the tool (and shipping to the buyer with transportation charges paid to any place within the contiguous 48 states). Returned goods will be evaluated by our warranty repair department and a conclusion will be determined and classified as:

a) Warranty Repair (free of charge)
b) Abuse /Neglect (bench fee and/or hourly rate)
c) Maintenance (Flat Fee)

Price Schedule as of 1/1/2007

Bench Fee: $55.00
Hourly Rate: $55.00 per hour
Flat Fee:
Level 1 - Adjustments and light repair $35.00 + parts
Level 2 – Maintenance, Oil Change $95.00 + parts
Level 3 – Overhaul, complete disassembly, change all seals $155.00 + parts

If inspection by the seller of returned goods shows no breach of the forgoing warranty, Seller's regular conditioning charges (as stated above) apply. Upon this conclusion we will either repair the tool at no cost to you and return it postage paid, or call you to inform you of the repair cost. The repair will need to be approved in writing before any work is performed.

A comprehensive tool service and repair program, for details contact your local area sales representative or call:

Industrial Rivet & Fastener Co.
200 Paris Ave
Northvale, NJ 07647
1-800-BUY-RIVET